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STATUS OF HUNGARIAN HIGHER EDUCATION IN MINING AND METALLURGY

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The present status of training for mining and metallurgical engineers in Hungary is alarming, and the problems of providing the mining industry with expert engineers are many.

One major obstacle is that the educational facilities are separated, with one mining engineering faculty located in Sopron and the other in Miskolc; a second obstacle is that a limited number of students are attracted into the field from the secondary schools. Before the liberation of Hungary, the majority of students entering the mining colleges were from mining regions and mining families. With the transfer of registration of mining training to Miskolc in 1949, the number of students increased temporarily, to ten times the number of preliberation students, but nothing was done in the way of propaganda to make mining careers more attractive to the rank and file of secondary school students. As a result, the mining school at Miskolc had to depend on the mining areas, an ever-dwindling source, for students. In an effort to maintain enrollment, it was necessary to accept students who were rejected from other technical fields. Training thus remained far below the necessary qualitative standards, particularly in the field of mine exploitation. This trend has been continuing since 1949, and although corrected to a certain extent, will continue to work a hardship on the mining industry.

The instruction at Miskolc lacks both the basic subjects and the calm, orderly milieu which are required for the study of mining. The experimental mass teaching and study methods used in several fields of technical training have proved a failure, particularly in the mining schools, where the least capable students have been enrolled. The situation has been further aggravated by the efforts of the Ministry of Education to reduce the number of students who drop out of training every year, and by the fact that not enough class hours have been allocated for basic and technical courses. Although the battle against waste progressed well in the field of production, it was not until the second half of 1953 that it began in the field of engineering training, when the Ministry of Education allowed examination requirements to be raised.

Jozsef Vero, professor of metallurgy at Miskolc, made the following comments about the Miskolc Technical University for Heavy Industry (Miskolci Muszaki Nehezipari Egyetem):

"Today, at the end of 1954, the construction of the Miskolc university is not yet finished, and 180 million forints are needed to carry out the present construction plan.

"A quick inspection of the university reveals many shortcomings: the location from the point of view of construction and transportation is indeed unfortunate; the exteriors of the buildings are, to put it frankly, ugly; there is a lack of space for the faculty; the campus is a bog in the rainy season and a dust hole in the dry season; eating facilities are inadequate and not inspected for sanitation; 60 percent of the faculty are unable to find living quarters in Miskolc and must walk long distances to work when traffic is disrupted by winter weather; there are hardly enough facilities for the engineering students, who comprise 70 percent of the student body, much less for the mining students; and the mass training techniques used here have been entirely unsuitable.

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"Both the Ministry of Education and the university underrated the difficulties involved. Feeling smug in their pioneer work and saying little, either from a misguided sense of modesty or from braggadocio, they brought a school into existence which is not only of something less than university caliber but is located in an inaccessible wasteland. Noninstructional organs of the university dominated planning and managed to inject their numerous naive concepts of education into the curriculum."

According to official information from the Ministry of Education, the training program for mining engineers must be put in proper order by 31 March 1955. There is no official word on what is to be done about the training of metallurgical engineers, so that may be considered as a closed issue insofar as the Ministry of Education is concerned. Therefore, the following recommendations pertain primarily to the education of mining engineers:

Since 1951, the Sopron Technical University Faculty (Soproni Muszaki Egyetemi Kar) has consisted of the Mining Engineering Faculty (Banyaszati Kar) and the Surveying Engineering Faculty (Foldmernoki Kar), while the Miskolc Mining Faculty has been a part of the Miskolc Technical University for Heavy Industry. At present, the Miskolc faculty teaches the 1st- and 2d-year courses for mine exploitation engineers, mine mechanical engineers, petroleum engineers, and geological engineers, and the 3d-year course for mine mechanical engineers. All other mining courses are taught at the Sopron school. These two faculties should be combined into a single, independent educational institution, namely, the Technical Mining University (Banyaszati Muszaki Egyetemen) as had been planned in 1951.

What size should the independent mining university be? From 1910 to 1950, about 550 mining engineers received degrees at our colleges. From 1950 to 1955, including the 1955 summer term, an additional 190 will have received degrees, making a total of 740 graduates from 1910 through 1955. From 1956 to 1960, 600 more engineers are expected to graduate. By 1960, the total number of mining engineers in Hungary should be 1,250-1,300. With about 800 surveying engineers graduating from Sopron, the figure would total 2,100. The engineers who leave the field each year (about 4-5 percent) must be replaced with new graduates. This means that each graduating class should average 100-120 students, and that the entire student body should number 500-600 during the 5-year course.

As for location, Sopron would be ideal. The environment is cultural and attractive, and the present buildings would suffice for the training of a select, small student body for a few years, during which time the faculty and university buildings could be expanded.

The technical supervision of mining engineering training should be in the hands of the Ministry of Mining, and technical guidance for instruction in geodetics and cartography should be provided by the Ministry of Education with the cooperation of the State Geodetic and Cartographic Bureau (Allami Földmérés és Térképészeti Hivatal).

There are 24 different training fields for engineers in Hungary today, of which six are for mining and surveying engineers and two for metallurgical engineers. In the course of the current rationalization of higher technical education, serious thought must be given to the possibility of again organizing all phases of mining engineering training into an independent university. Since our job is to train expert engineers, the mining and metallurgical engineering faculties request and expect the assistance of the entire Hungarian mining and metallurgical profession in eliminating the obstacles which now make the job so difficult.

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